Sputter Samples for ETA-RT Tester Verification

Conditions	Setup of the Balzers Sputter was like shown in the Printout of 28.05.98 17:52.10 Substrates with no groove are used

No.	Description	Sputter stat.	PC1 shots	t[s] time	PC2 shots	t[s] time	PC3 shots	t[s] time	PC4 shots	t[s] time	PC5 shots	t[s] time	PC6 shots	t[s] time
001	Clear disc	not sput.												
002	Clear disc	not sput.												
003	Clear disc	not sput.												
101	single layer	ZnS+SiO2 sput.	2	9,00										
102	single layer	ZnS+SiO2 sput.	2	9,00										
103	single layer	ZnS+SiO2 sput.	2	9,00										
201	single layer	ZnS+SiO2 sput.			2	9,00								
401	single layer	ZnS+SiO2 sput.									2	9,00		
301	single layer	AgInSbTe sput.							1	27,00				
302	single layer	AgInSbTe sput.							1	27,00				
303	single layer	AgInSbTe sput.							1	27,00				
501	single layer	AlTi sput.											1	3,00
502	single layer	AlTi sput.											1	1,00
503	single layer	AlTi sput.											1	1,00
601	triple layer	RW-layer stack	1	5,35	1	5,35			1	8,78	1	3,53		
602	triple layer	RW-layer stack	1	5,35	1	5,35			1	8,78	1	3,53		
603	triple layer	RW-layer stack	1	5,35	1	5,35			1	8,78	1	3,53		
701	triple layer	RW-layer stack	1	5,35	1	5,35			1	7,00	1	3,53		
702	triple layer	RW-layer stack	1	5,35	1	5,35			1	7,00	1	3,53		
703	triple layer	RW-layer stack	1	5,35	1	5,35			1	7,00	1	3,53		
801	triple layer	RW-layer stack	1	5,35					1	7,00	1	6,00		
802	triple layer	RW-layer stack	1	5,35					1	7,00	1	6,00		
803	triple layer	RW-layer stack	1	5,35					1	7,00	1	6,00		
901	quadro layer	RW-layer stack	1	5,35					1	7,00	1	6,00	1	1,00
902	quadro layer	RW-layer stack	1	5,35					1	7,00	1	6,00	1	1,00
903	quadro layer	RW-layer stack	1	5,35					1	7,00	1	6,00	1	1,00

Sputter rates and calculated and measured layer thicknesses

sputter rates from ODTC meas.						complexe refractive index derived by Philips at 780 nm						
PC1	PC2	PC3	PC4	PC5	PC6	phase	AgInSbTe		ZnS+SiO2		AlTi	
[Å/s]	[Å/s]	[Å/s]	[Å/s]	[Å/s]	[Å/s]		n	k	n	k	n	k
82,2	82,2	20,5	82,2	200,0		amorph	3,92	-4,85	2,125	0	2,4	-8
						crystall.	4,83	-1,86	PC		1,57	0
									UV-coat		1,5	0

ETA-RT values

No.	cal. Thick [nm]	meas. thick. [nm]	n [1]	k [1]	thick	fit_dev	thick	fit_dev	thick	fit_dev	thick	fit_dev
					45/0		45/90		45/180		45/270	
001	0,0											
002	0,0											
003	0,0											
101	148,0				156,00	3,328E-05	155,50	2,185E-05	156,00	1,977E-05	156,00	6,520E-05
102	148,0				155,00	1,881E-05	155,50	6,609E-05	155,50	3,450E-05	153,40	2,025E-05
103	148,0				156,00	2,573E-05	156,00	7,507E-05	156,00	2,088E-05	156,00	2,562E-05
201	148,0				153,70	1,977E-05	153,70	2,003E-05	153,70	2,071E-05	153,70	2,241E-05
401	148,0				154,10	1,623E-05	154,10	3,002E-04	169,00	1,327E-05	169,00	1,673E-04
301	55,4											
302	55,4											
303	55,4											
501	60,0											
502	20,0											
503	20,0											
601	135,0											
602	135,0											
603	135,0											
701	131,3											
702	131,3											
703	131,3											
801	107,6											
802	107,6											
803	107,6											
901	127,6											
902	127,6											
903	127,6											

values are appr. +/- 3 nm correct

Verteilt
vor Ort
8.6.98